1: J Biochem (Tokyo). 1989 Aug;106(2):299-303. Related Articles, Links

Inhibitory effect of alpha 2-macroglobulin on Vibrio vulnificus protease.

Miyoshi S, Shinoda S.

Faculty of Pharmaceutical Sciences, Okayama University.

Vibrio vulnificus, an etiologic agent of wound infections and septicemia in humans, elaborates a metalloprotease which is known to be an important virulence factor of the Vibrio. The proteolytic activity of V. vulnificus metalloprotease (VVP) toward casein and elastin was inhibited by alpha 2-macroglobulin (alpha 2 M) at the molar ratio of 1:1, although partial activity was maintained. Permeability-enhancing and hemorrhagic activities were also inhibited, but the peptidase activity toward Z-Gly-Phe-NH2 was not reduced, even by an excess amount of alpha 2 M. VVP formed a complex with alpha 2 M through cleavage of the bait regions of all four alpha 2 M subunits and elicitation of conformational change of the alpha 2 M molecule, which resulted in entrapment of VVP in the alpha 2 M molecule. The peptidase activity of alpha 2 M-VVP complex was inhibited by low-molecular-weight inhibitors such as phosphoramidon, but IgG antibody against VVP failed to neutralize its peptidase activity. Of human plasma proteins, alpha 2 M was the only inhibitor for VVP. These findings indicate that VVP produced during V. vulnificus infection is inactivated by plasma alpha 2 M that leaks from the vascular system.

PMID: 2478526 [PubMed - indexed for MEDLINE]

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1: Zhonghua Yi Xue Za Zhi. 2001 Nov 25;81(22):1390-1. Related Articles, Links

[Clinical significance of the novel tumor marker CYFRA21-1 in patients with esophageal cancer]

[Article in Chinese]

Wang T, **Zhang W**, **Liu Y**.

Department of Thoracic Surgery, Peking Union Hospital, Peking Union Medical Collage, Beijing 100730, China.

OBJECTIVE: To study the clinical significance of the novel tumor marker--CYFRA21-1 in patients with esophageal cancer. METHODS: The CYFRA21-1 level in serum of 84 patients with a definite diagnosis of esophageal cancer was examined 10 days before and after operation by ELISA. A 3 years' follow-up was conducted to the survival of patients. RESULTS: (1) The CYFRA21-1 level was > 3.3 ng/ml in 72.6% of the patients (61/84). (2) The serum CYFRA21-1 level decreased significantly after operation in patients at stage III or with high differentiation ($P < 0.05$). (3) The difference between pre- and post-operative serum CYFRA21-1 levels was statistically significant in patients who had undegone radical operation, and was not in patients who had undergone palliative operation. (4) In addition to stage ($P < 0.05$) and type of operation ($P < 0.05$), the difference of CYFRA21-1 level before and after operationwas closely related to the prognosis ($P < 0.05$). CONCLUSION: CYFRA21-1 is a useful marker in diagnosis and prediction of prognosis of esophageal cancer.

PMID: 11930636 [PubMed - indexed for MEDLINE]

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